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Dinoflagellate cyst biostratigraphy of the Patasar Shale Member (Upper Jurassic) of the Wagad Uplift, Kachchh, Gujarat, western India

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ABSTRACT

Two samples were analysed from the lowermost Patasar Shale Member of the Patasar Tank section on the western margin of the Wagad Uplift in the Kachchh Basin of Gujarat, western India. One of the samples produced an abundant, diverse and well-preserved palynobiota. The other sample produced a significantly sparser association, but of similar character. The overall assemblage is dominated by relatively long-ranging Jurassic gymnospermous pollen grains, but also includes dinoflagellate cysts of definite Gondwanan affinity. The dinoflagellate cysts are confidently correlated to the Australian *Dingodinium swanense* Interval Zone, which is of Kimmeridgian (Late Jurassic) age. This indicates that the Australasian Jurassic dinoflagellate cyst biostratigraphical scheme can be applied in western India, and probably throughout the Indian subcontinent. Due to evidence from ammonites and calcareous nannofossils in the Patasar Shale Member, allied with other biostratigraphical evidence from New Zealand and Papua New Guinea, the age of the *Dingodinium swanense* Interval Zone is reinterpreted as being of Early Kimmeridgian age. The *Dingodinium swanense* Interval Zone was previously assigned to

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